STANDARD FOR PERMANENT STABILIZATION WITH SOD

Definition

Establishing permanent vegetation using sod.

Purpose

To permanently stabilize topsoil with an immediate aesthetic covering, thus assuring conservation of soil and water, and to enhance the environment.

Water Quality Enhancement

Provides an immediate, permanent vegetative cover to the soil from the impacts of wind or rain and prevents soil and nutrient losses to streams and other stormwater conveyances from stormwater runoff.

Where Applicable

On exposed soils that have a potential for causing off-site environmental damage where an immediate, permanent, vegetative cover is desired. Water (rain or irrigation) is required for success; access to irrigation is essential during drought.

Methods and Materials

1. High quality cultivated sod is preferred over native or pasture sod.

2. Sod should be free of broadleaf weeds and undesirable coarse and fine weed grasses.

3. Sod should be of uniform thickness, typically 5/8 inch, plus or minus 1/4 inch, at time of cutting (excludes top growth.).

4. Sod should be vigorous and dense and be able to retain its own shape and weight when suspended vertically with a firm grasp from the upper 10 percent of the strip. Broken pads and rolls or torn and uneven ends will not be acceptable.

5. For droughty sites, a sod of turf-type tall fescue or turf-type tall fescue mixed with Kentucky bluegrass is preferred over a 100% Kentucky bluegrass sod. Although not widely available, a sod of fine fescue is also acceptable for droughty sites.

6. Only moist, fresh, unheated sod should be used. Sod should be harvested, delivered, and installed within a period of 24 hours or less during summer months.

1. Site Preparation

    A. Grade as needed and feasible to permit the use of conventional equipment for liming, fertilizing, incorporation of organic matter, and other soil preparation procedures. All grading should be done in accordance with Standard for Land Grading.

    B. Immediately prior to sodding and topsoil application, the surface must be tested for compaction or receive compaction remediation measures, in accordance with the

Standard for Land Grading, as appropriate.

C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 6 inches (unsettled) is required on all sites. See the Standard for Topsoiling for topsoil and amendment requirements.

D. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways

2. Soil Preparation

A. Uniformly apply ground limestone, and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices (http://njaes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet using 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply ½ the rate described above during seedbed preparation and repeat another ½ rate application of the same fertilizer within 3 to 5 weeks after seeding**.** Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes. Table 6-1 is a general guideline for limestone application rates.

Table 6-1

Limestone [1.] Application Rate by Soil Texture

SOIL TEXTURE	TONS/ACRE	LBS./1000 SQ. FT.
Clay, clay loam, and high organic soil	3	135
Sandy loam, loam, silt loam	2	90
Loamy sand, sand	1	45

1. Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick-Trenton line; however, this should be confirmed by soil testing.

B. Work lime, and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonably uniform, fine seedbed is prepared.

C. Remove from the surface all objects that would prevent good sod to topsoil contact and remove all other debris, such as wire, cable, tree roots, pieces of concrete, clods, lumps, or other unsuitable material.

D. Inspect site just before sodding. If traffic has left the soil compacted, the area must be retilled and firmed in accordance with the above.

3. Sod Placement

   A. Sod strips should be laid on the contour, never up and down the slope, starting at the bottom of the slope and working up. On steep slopes, the use of ladders will facilitate the work and prevent damage to the sod. During periods of high temperature, lightly irrigate the soil immediately prior to laying the sod.

   B. Place sod strips with snug, even joints (seams) that are staggered. Open spaces invite erosion.

   C. Lightly roll or tamp sod immediately following placement to insure solid contact of root mat and soil surface. Do not overlap sod. All joints should be butted tightly to prevent voids which would cause drying of the roots and invasion of weeds.

   D. On slopes greater than 3 to 1, secure sod to surface soil with wood pegs, wire staples biodegradable plastic spikes, or split shingles (8 to 10 inches long by 3/4 inch wide).

   E. Surface water cannot always be diverted from flowing over the face of the slope, but a capping strip of heavy jute or plastic netting, properly secured, along the crown of the slope and edges will provide extra protection against lifting and undercutting of sod. The same technique can be used to anchor sod in water-carrying channels and other critical areas. Wire staples must be used to anchor netting in channel work.

   F. Immediately following installation, sod should be watered until water penetrates the soil layer beneath sod to a depth of 1 inch. Maintain optimum water for at least two weeks.

4. Topdressing - Since soil organic matter and slow release nitrogen fertilizer (water insoluble) are prescribed in Sections 1 and 2in this Standard, a follow-up topdressing is not mandatory, except where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop, topdressing shall then be applied. Topdress with 10-0-10 or equivalent at 400 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

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